



INVENTION DISCLOSURE RECORD

PREPARATION & ROUTING INSTRUCTIONS

Complete and fill in every item. Write "none" or "unknown", if appropriate.

Use an additional blank page for any item where more space is needed.

Have your manager review and sign (items 9 and 10) before submitting to the NCR Law Department.

Submit original and one copy to: NCR Corporation, Intellectual Property Section, Law Department, ECD-2, 101 W. Schantz Avenue, Dayton, Ohio 45479. Keep one copy for your file.

Docket No.	9419.
Date Received	27 July 2000
Attorney	

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27 JUL 2000

INTL PATENTS

(1) Inventor(s)	Facility	Department	Phone Number
Robin Mackay	FSG	Knowledge Lab	+44-207-7258198
Richard Cudd	FSG	Knowledge Lab	+44-207-7258729

(2) Title of Invention (Preferably 10 words or less)
Peer-to-Peer Live Auction System

(3) Product, Project Name or Class Number	(4) Date invention was First Conceived	(5) Actual or Anticipated Date of First Product Sale, Customer Availability, or Public Disclosure
Unknown	18 May 2000	Unknown

(6) Description of the Invention

Please attach additional pages providing the following:

- Statement of problem solved by the invention - Briefly state the problems your invention solves, its purposes and advantages, and how it differs from prior designs that you are aware of.
- Description of the invention - Describe your invention in detail. Include and refer to sketches or diagrams and, if appropriate, attach documents such as previously prepared descriptions or specifications.
- Summary of Invention - State what you regard at the present as the key inventive concept - i.e., the gist of your invention.

(7) Inventor Signature(s) (Each person listed in Item 1 above is an inventor and must sign and date.)

Signature of Inventor	Date	Signature of Inventor	Date
	24-7-00		
Signature of Inventor	Date	Signature of Inventor	Date
	24-7-00		

(8) Witness Signatures (Two persons who are not inventors must read and understand this disclosure, and then sign and date.)

Signature of Witness	Date	Signature of Witness	Date
	24.7.00		24/07/00

FOR MANAGER USE ONLY

(9) Strategic Value of Patent Coverage (State what you regard as the strategic value to your business unit of having a patent for this invention - e.g., licensing revenue, preventing use by others, importance/breadth of the invention, etc.)

(10) Reviewed and approved by

Signature of Manager	Date	Manager Name (Please print)	Tentative Rating* (A, B, C, D, or U)
	24.7.2000	EMMOTT	A*

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ATTORNEY - CLIENT PRIVILEGED

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(7a). Statement of problem solved by the invention – Briefly state the problem your invention solves, its purposes and advantages, and how it differs from prior designs that you are aware of.

Problem Solved by the Invention

It is widely accepted that online auctions are an area of growth within e-commerce. At the moment online auction websites enable the users to visit a website and make bids for items, upon which the system negotiates an outcome. The disadvantages with this approach is that it is necessary to continually check back to the website to see how the auction is going and how it effects you as a user. This invention describes a piece of software that is resident on a users PC or other computing device, and enables them to participate in auctions and connect directly via the internet to the seller or buyer of goods without the need for a third party website.

Description of the Invention

An application for end users such that the software is installed upon the user's "desktop" and runs constantly as a background task on their PC. The application allows the user to create 'agents'. A *seller* agent creates an auction on the user's machine, given certain parameters (reserve price, date of auction and description of product). A *bidder* agent is one which searches other participating systems over a communications network for an auction which fits the users criteria, and either (a) makes bids on the users' behalf or (b) connects the user to the seller in order that they may bid "live " for the object or service on sale.

Advantages

The system allows direct communication link between buyers and sellers thus alerting you to changes in the auctions as soon as they happen. This direct link also means that it is possible to perform "live" online auctions as well as the automatic auctions that occur on existing auction sites. Other desktop tools such as AOL instant messenger (a tool of live chat) have demonstrated the power of having an application which is constantly running in the background of the computer and it's appeal to users over accessing a simple website for "live" services. The agents system also offers and enhance searching ability with utilizes co-occurrence and context vector pattern matching technologies, other auction and trading systems rely on simple keyword pattern matching for search through products.

Previous Designs and Prior Art

E-bay
QXL
Instant Messenger
Gnutella
Napster

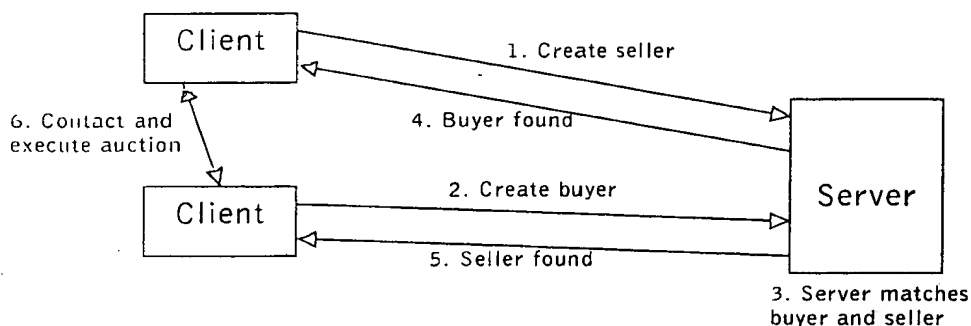
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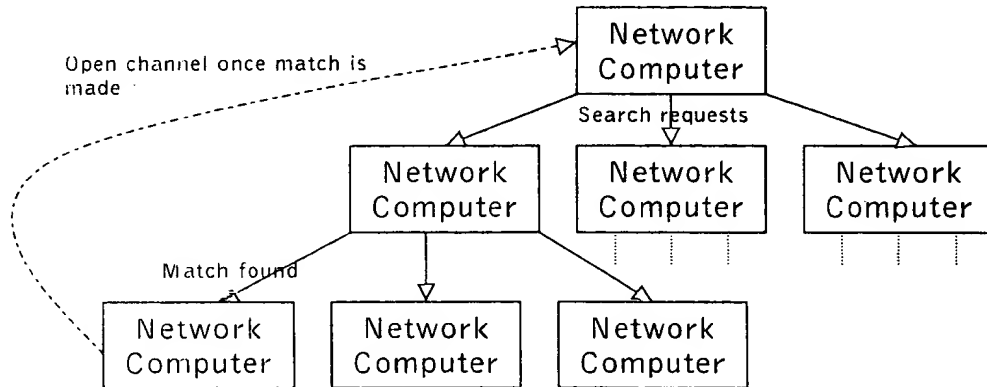
(7b). Description of the invention - (Describe your invention in detail. Include and refer to sketches or diagrams and, if appropriate, attach documents such as previously prepared descriptions or specifications.)

The system operates using a combination of client-server and peer-to-peer computing architectures. The user has an application that runs on their machine in the background. It enables the user to create buyer and seller agents from the application. The details of both the buyers and sellers are then uploaded to a centralised database that finds matches. The users are informed of a match and can then directly communicate with one another to carry out the auction. The auction can either be automatic or live depending on the user preferences.

Below is a diagram of the systems architecture:



Another possible architecture removes the need for a central server is a daisy chain peer to peer connection. In this scenario each network computer is connected to a few other machines, say three, which are in turn connected to a few other machines and so on. When searching for matches the request is forwarded to the machines the user is connected to. If no match is found on these machines then the request is forwarded to the machines that these are connected to. This continues until a match is found or until a certain number of machines have been searched.



(7c). Summary of invention - (State what you regard at the present as the key inventive concept - i.e., the gist of your invention.)

A distributed auctioning system which accurately matches buyers and sellers using a peer to peer architecture enabling not only automated but also "live" Internet auctions.



Intracorporation

Date: November 5, 2001

To: Christine Sheppard, Paralegal
Location: International IP Department, London, 6205

From: Michael Chan, Senior Attorney
Location: Law Department, Intellectual Property Section, WHQ5E
Phone: 937 445-4956; VP 622-4956
Fax: 937 445-3733; VP 622-3733
Email: Michael.Chan@DaytonOH.NCR.COM

Subject: **Docket No. 9419.00**

B

9 NO

Enclosed is a patent application that has previously been reviewed by the inventor(s) and has been filed in the U.S. Patent and Trademark Office, including a Declaration and Power of Attorney and an Assignment that will require the signature of the inventor(s). As I discussed with you earlier, we are providing you with one set of the patent application for inventor Mackay and two sets of the application for inventor Cudd.

With regard to this application we have enclosed for each inventor:

- (1) a copy of the associated drawings;
- (2) a copy of the specification, claims and Declaration and Power of Attorney; and
- (3) a copy of the Assignment papers by which said application is assigned to NCR Corporation

With regard to the Declaration and Power of Attorney, please have the inventor(s) review the application, and if satisfied, their name should be signed in the space(s) provided, *exactly* as it is typewritten. A space for the date of signing is also provided for each inventor to fill in when signing. **Notarization is not required.**

The Assignment paper should also be signed and dated the same day the Declaration and Power of Attorney is executed. **Notarization is not required.**

All stapled material should remain stapled for filing in the United States.

We will soon receive a notice from the USPTO requiring us to complete this application by filing a copy of the application signed by the inventor(s). A limited time is provided for us to comply with this requirement. Accordingly, please return the executed documents to our office *as quickly as possible* so that we can comply with the USPTO requirement.

Michael Chan

/sad
Enclosures

CONFIDENTIAL ATTORNEY-CLIENT COMMUNICATION



International Intellectual Property Department
November 15, 2001

NCR Limited
206 Marylebone Road
London NW1 6LY
Tel: 020 7723 7070
Fax: 020 7725 8333

Robin Mackay
1 Colman's Wharf
45 Morris Road
London E14 6PA

RECORDED DELIVERY

Dear Mr Mackay,

Re: Application for Patent in US
Entitled: 'ONLINE AUCTION SYSTEMS'
Our Ref: 9419

Please find enclosed, a document of Assignment and a Combined Declaration & Power of Attorney for the above identified application. These documents are required by the United States Patent Office. I should be pleased if you would sign and date these documents where indicated. As you have changed your address, would you please cross out the old address on the Declaration, add your new address and initial the change. When completed, please return the documents to this office, an addressed envelope is enclosed for your use.

Yours sincerely,

C Sheppard
Enc: Declaration
Assignment
SAE

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91 The Fairway
Burnham
Slough, Berks.
SL1 8DY

01628 605465

23 January 2002

Miss C Sheppard,
International Intellectual Property Department,
NCR Limited,
206 Marylebone Road
London NW1 6LY

Dear Miss Sheppard,

Richard Cudd – Patent Documentation

With reference to your letter dated 10th December, please find enclosed the documentation duly signed by Richard.

The wedding went very well and we all had a wonderful stay in Australia.

Richard plans to return to the UK towards the end of this year, but in the meantime, please do not hesitate to contact me if I can be of any further assistance.

Yours sincerely,



Rosemary Alexander

Encs.

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15 October 1998

NCR Financial Solutions Group Limited
206 Marylebone Road
London NW1 6LY
Tel: 0171-723 7070

Mr Robin Mackay
21 Mauretania Building
Atlantic Wharf
4 Jardine Road
London
E1 9WB

Dear Robin

After recent discussions, I am pleased to confirm the following details of our offer of a permanent position within NCR Financial Solutions Group Limited.

position
SW
16/10/98

Position: Research Fellow.

Band: B1.

Role: To conduct research into the use of emerging Internet and communication technologies and protocols, including XML, Java, JINI, wireless IP and exploitation of these to develop leading-edge electronic financial services/ e-commerce applications.

To conduct and lead research into exploring and creating future Internet appliances with a focus on 'relationship technologies', electronic financial services and electronic commerce.

To manage the Knowledge Lab IT infrastructure and support the IT requirements of the Lab Team, including networking, the Web, software and different operating systems including Unix, Mac and NT.

Reporting to: Stephen Emmott, Director, Knowledge Lab.

Organisation: NCR Financial Solutions Group Limited.

Based at: 206 Marylebone Road, London NW1 6LY.

Reference Date: 15 October, 1998.

Remuneration: £35,400 per annum.

Hours of Work: 9.00am - 5.00pm Monday - Friday. You may be required to work such reasonable hours as the needs of this particular position dictate.

Annual Leave Entitlement: 21 days (pro-rated from the actual start date and for part-time positions) in any one calendar year, in addition to 3 nominated Company days plus 8 Statutory days.

Your next salary review will be in March 2000 subject to satisfactory performance.

You will be eligible to participate in the FSG Employee Incentive Plan which has an on - target payment of 5% of base salary. However, in practice, the award can range from 0% to 10%. This will be calculated and a payment made (if any) during the 1 st quarter of 1999 and will be pro-rated for length of service in 1998.

Company Car: In your capacity as Research Fellow, you are eligible for a Company car, Group B. This car may be used within reason for private journeys subject to conditions and in accordance with instructions issued from time to time by the Company. You should acquaint yourself with the terms under which the car is insured, and should take care to ensure that it is not used in circumstances outside these terms. You must also ensure that you are eligible to drive within the UK subject to requirements set by the Driving Vehicle Licensing Authority.

The vehicle provided may not necessarily be new should there be one readily available from within the fleet.

At the level of the above position, the choice of car is based on a benchmark lease value of £267 per month. Alternatively you may opt to have a car allowance equating to £3,700 per annum subject to taxation, which will be paid in 12 monthly instalments directly into your bank account and will form part of your salary payment.

Medical Insurance Cover:

The Company will subscribe for Medical Insurance coverage for you (and your spouse/partner/family). Full details will be sent to you under separate cover.

Flexible Compensation:

FSG's "flexible compensation" gives you the opportunity to tailor your benefits to match your individual needs and preferences. The total value of all elements of your compensation will remain the same, but you will have the opportunity to influence the range of benefits you receive. Full details of the plan will be sent to you under separate cover.

Pension Plan:

On joining the Company you will be eligible to become a member of NCR Scotland Pension Plan, which includes 1) The Final Salary Plan, 2) The Money Purchase Plan, and 3) The Death Benefits Plan. The costs of the Final Salary part and the Death Benefits part are fully paid for by the company. You are required to contribute to the Money Purchase part. If you elect to join the Pension Plan, under what is known as the Defined Contribution element of the plan, you will contribute a minimum of 3% of your salary. NCR will match this with a further 1.5%, that is, 50% of your contribution. NCR matching at a rate of 50% of the level at which you choose to pay will occur up to a 2.5% NCR contribution. You can also pay additional voluntary contributions up to 10% - which would take your total contribution possible up to 15%. You will receive more details under separate cover.

Dental Plan:

On joining the Company you will be eligible to receive National Dental Plan coverage. Further details will be issued to you upon commencement of employment.

Smoking Policy:

Your attention is drawn to the Company's No smoking policy. Smoking is not permitted at 206 Marylebone Road or any of the other Company premises.

This appointment is subject to the Terms and Conditions of Employment, set out in the attached document, which has been prepared to conform with the provision of the Employment Rights Act 1996. Please could you sign this and return a copy.

I am delighted that we are able to make you this offer which reflects the confidence we feel resulting from your contribution thus far. Well done.

Yours sincerely



S C K Littlejohn
Human Resources Department

Encl.



Agreed and Accepted
Name

15/10/98

Date



Financial Solutions Limited

TERMS AND CONDITIONS OF EMPLOYMENT

1. EMPLOYER: NCR Financial Solutions Group Limited 206 Marylebone Road, London NW1 6LY ("The Company")

2. EMPLOYEE: Robin Mackay

3. DEPARTMENT: Business Development and Strategic Marketing

4. DATE OF ISSUE: October 15th 1998

5. CONTINUITY: October 15th 1998

Your employment with the Company is effective from your employment with your previous employer not applicable from does/does not count as part of your period of employment.

6. REFERENCES AND HEALTH:

Engagement is subject to:

- a) Satisfactory references
- b) Acceptance of the completed Medical History form
- c) A satisfactory medical examination, if required by the Company's appointed Doctor.

7. JOB TITLE: Research Fellow

8. HOURS:

Your normal working week is 35 hours, Monday to Friday 9.00 a.m. to 5.00 p.m. with a lunch period of 1 hour Details of flexible working hours will be sent to you if applicable.

9. REMUNERATION:

Your salary is £35,400 per annum, paid monthly, paid by Banker's Order on the 16th of each month for the current calendar month subject to adjustment for any lost time or National Insurance deductions while on sickness absence, in the previous month, or for any unauthorised absence.

10. HOLIDAYS:

In addition to Statutory Public Holidays, paid holiday entitlement is calculated according to your length of service as it would be at 31 December of the current holiday year. Holidays for one year are earned on the basis of your months of service during the year. Subject to the approval of your manager this may be taken in advance at any time during the holiday year (1 January-31 December), however up to 20% of your entitlement may be carried over to the subsequent year, but must be taken by 31 March. The basic holiday entitlement after 1 years service with the Company is 20 days. On joining the Company, holiday entitlement for the first year of service is as follows:-

MONTH OF JOINING - DAYS OF HOLIDAY ENTITLEMENT (First Year)

January: 21 days	April: 16 days	July: 11 days	October: 6 days
February: 19 days	May: 14 days	August: 9 days	November: 4 days
March: 17 days	June: 12 days	September: 7 days	December: 2 days

This assumes that the employee commences on the first working day of the month. Staff joining in the middle or end of a month are not entitled to holiday for that month.

Additional entitlement is given for service up to 25 years as shown below:-

1 to 5 years service	: 21 days holiday	over 15 to 20 years service	: 24 days
over 5 to 10 years service	: 22 days holiday	over 20 to 25 and over years service	: 25 days
over 10 to 15 years service	: 23 days holiday		

Previous broken service with the Company does not qualify for extra holidays for service.

On leaving the Company you will be paid, in lieu of any holiday entitlement not taken on date of leaving at the rate shown below according to your length of service as at the date of leaving:-

1 to 5 years service	: 1.75 days per pay month	over 15 years but less than 20 years	: 2.00 days pay per month
over 5 years but less than 10 years	: 1.83 days per pay month	over 20 years but less than 25 years	: 2.08 days pay per month
over 10 years but less than 15 years	: 1.92 days per pay month	25 years and over	: 2.08 days pay per month

Equally, if, when you leave the Company you have exceeded your holiday entitlement, your final pay will be reduced by the appropriate amount. Entitlement and payment for holidays under particular trade or industry agreement will apply where appropriate.

11. SICKNESS AND INJURY BENEFIT:

At the Company's discretion, non obligatory payments will be made to you during sickness absence or injury

- a) inform your manager immediately by telephone
- b) complete Employee Statement of Absence From Work if you are sick for 4, 5, 6, or 7 days (including weekends).
- c) provide a medical certificate from your illness lasts more than 7 days (including Saturdays, Sundays, and Statutory Public Holidays).
- d) send a medical certificate for each subsequent week of continued illness.

All sickness payments by the Company take into account Statutory Sick Pay (S.S.P). If you are excluded from S.S.P. but eligible for National Insurance benefit (N.I.B.) NCR will deduct the standard rate of N.I.B. from your pay. (In the case of married woman the benefit deducted will be that which they would receive if they were making full contributions). Payments will be based on a service related scale. Up to 3 months service allows a maximum payment of 2 weeks basic pay. Between 3-6 months service allows a maximum of 4 weeks basic pay. After 6 months service payments are related to length of service. Any entitlement in respect of continuous absence through sickness or injury will be subject to frequent review. A Personal Accident Insurance scheme covers employees in the event of personal injury whilst on Company business other than at their normal place of work or travelling between home and their normal place of work.

12. PENSION PLAN MEMBERSHIP

Membership to the NCR Pension Plan is a condition of employment for all full-time permanent employees provided you are not within five years of normal pension age. Full details of the Pension Plan are contained in the Pension Plan explanatory booklet.

13. CONFIDENTIAL INFORMATION

You will not, during your employment with the Company or at any time thereafter, without written permission of the Company, disclose to any person outside the Company, or to any person within the Company other than a person whose province it is to know the same, any information relating to the Company's business which is of a confidential nature or disclosure of which may damage the interests of the Company. Also you will not use for any purpose or for purposes other than those of the Company, any information which you may acquire relating to the Company's business. On termination of your employment you will deliver to the Company on your last working day (without keeping any copies) any documents or other media relating to the business of the Company.

14. OUTSIDE SUBMISSIONS

It is most important that the Company shall not be placed in a position of confidential trust or relationship with respect to any unsolicited disclosure of information received from anyone outside the Company. In order that all matters relating to outside submission of information may be handled in a legally correct manner, any idea or suggestion submitted to you by a customer or other third party concerning technical developments or products including software, should be forwarded by you unanswered to International Patents Department, Head Office.

15. INVENTIONS ETC...



Financial Solutions Limited

TERMS AND CONDITIONS OF EMPLOYMENT

- a) You will as soon as reasonably possible disclose confidentially to the Company and to no one else full particulars of all inventions, improvements and designs made or discovered by you, wither alone or jointly, whilst in the service of the Company, which relate to or are capable of use in connection with any of the products made, sold or hired by the Company or the manufacturer thereof, or any of the Company's business processes.
- b) The rights as between the Company and yourself in any invention as specified above, shall be as set out in the Patents Act 1977.
- c) In respect of any invention as specified above, unless it has been established that such invention does not belong to the Company, the Company has absolute discretion as to whether any application for a patent or other protection shall be made on such invention, and has the right to abandon any such application and any patent granted thereon.
- d) The Company shall pay a monetary award to you in respect of any invention belonging to the Company which has been made by you, either alone or jointly, and in respect of which a patent application has been filed. Such award shall be in accordance with the Invention Recognition and Incentive Plan as set out in the Corporate Patent Policy.
- e) In consideration of your salary or wages, any industrial property rights other than inventions arising from work done by you in the course of your duties as an employee of the Company and which relate to the business of the Company shall belong exclusively to the Company. Such industrial property rights include, but are not limited, to copyright, industrial and artistic designs, trade marks, trade secrets, know-how and other confidential information.
- f) you will at the request and cost of the Company, whether during or after you employment with the Company, execute any document and do any acts necessary to enable the Company or its assigns to obtain patent protection in any part of the world in respect of any invention as specified in paragraph a) above, unless it has been established that such invention does not belong to the Company, and to obtain registered design, copyright or other protection in respect of industrial property rights as specified in paragraph e) above.

16. DISCIPLINE PROCEDURE:

Stage 1: Verbal warning - by appropriate Supervisor or Manager, who will record the warning.

Stage 2: or formal letter: Written warning - by the Manager.

Stage 3: Final warning - by the Manager. At this stage the employee will be informed by the Manager that any further occasion requiring disciplinary action may lead either to a reduction of bonus, suspension with or without pay, or dismissal.

Stage 4: If further occasion arises the employee will be interviewed and the circumstances reported in writing, together with details of previous occasions and a recommendation to the employee's director. The director's decision will be sent to Personnel Resources who will write to the employee advising him or her of the decision and confirming the circumstances leading to it.

If the offence is sufficiently grave, the Company reserves the right to take action without recourse to the full procedure. Examples of misconduct which may lead to disciplinary procedure, and if necessary suspension or dismissal without recourse to the full procedure are contained in the Staff Manual.

All written warnings and reports will be recorded on either a Discipline Report Form or in a formal letter clearly stating that it is a written warning. The Employee will be required to sign in acknowledgement of a warning being given. The employee will be given a copy of the warning and an additional copy will be sent to Personnel Resources.

At any or all of these stages the employee may be accompanied by a fellow employee of his or her choice.

17. GRIEVANCE PROCEDURE:

Stage 1: Any employee wishing to raise an issue in which he or she is directly concerned should take this up either verbally or in writing with his/her superior who will endeavour to resolve the issue within 5 days.

Stage 2: If the grievance is not resolved at Stage 1, the immediate supervisor will complete a Report Form and pass it at once, with a request for a meeting to his/her Manager. This meeting will take place no later than 7 working days after that date.

Stage 3: Failing settlement at Stage 2, the matter will be referred forthwith by the Manager concerned to his Director to resolve the issue raised.

*This procedure will apply unless some other procedure has been agreed with a trade union or other organisation of workers.

18. APPEALS PROCEDURE:

If you wish to appeal against any decision taken against you or any personal grievance or disciplinary matter, then a written application should be made to the Director, Personnel Resources at Head Office, who will arrange for your appeal to be considered.

19. OTHER BUSINESS ACTIVITIES:

You will not engage in any other business activities or deal in any way with Company products or any similar products, except in the normal and proper course of your employment with the Company.

You will not either directly or indirectly be engaged in any other trade, profession or business which could in any way represent a conflict of interests with those of the Company. Where there is any uncertainty or possibility that a conflict of interest might arise, the prior written approval of the Company must be obtained before any such activity is entered into. A written application should be made to the Director, Personnel Resources, who will arrange for your request to be considered.

It is strictly prohibited to receive any compensation (commission, prize, or whatever form it may take) from a third party (Leasing Company, outside Software House, etc.) for giving them NCR business of any kind generated in the course of our normal selling activities. Violations of this rule will be subject to disciplinary action, including dismissal.

20. TERMINATION:

If you wish to resign from the Company you must give one month's notice in writing irrespective of your length of service. In certain exceptional circumstances the Company may waive this requirement.

Should the Company have reason to terminate your employment, you are entitled to receive notice:-

SERVICE	NOTICE
1 week to 5 years	4 weeks
5 years to 6 years	5 weeks

Thereafter for each additional year of service on additional week's notice to a maximum of 12 weeks for 12 or more year's continuous service.

The Company may in certain circumstances determine to make payment in lieu of all or part of this notice period.

In cases of gross misconduct or dishonesty, it may be necessary for the Company to terminate your employment without notice or payment in lieu of notice.

21. CHANGES:

Changes in the terms and conditions of your employment will be confirmed to you either by letter, general notice or by the re-issue or amendment of this document or any accompanying schedules.

22. BASIS OF AGREEMENT:

These terms and conditions of employment together with the letter of offer and the Company's rules and procedures formulate the basis of this agreement between you and the Company.

AUTHORISATION:

Signed on behalf of the Company

[Signature]

Position:

H R Manager

ACKNOWLEDGEMENT:

I have read and understand the above terms and conditions and hereby acknowledge their receipt.

Signed

[Signature]

Date:

15 / 10 / 98

234/11-84

ISSUED BY HUMAN RESOURCES